

East Asia Training & Consultancy Pte Ltd

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The STATA logo consists of the word "STATA" in a bold, white, sans-serif font, with a registered trademark symbol (®) to its upper right. The logo is set against a dark blue background that features a subtle, glowing light effect on the right side.

Statistical Software for Professionals

Time Series & Forecasting Using STATA

3-Day Professional Development Workshop

East Asia Training & Consultancy Pte Ltd invites you to attend a three-day professional development workshop, reviewing statistical methods and time series using Stata to analyse the course databases. Stata is the well-known statistics and econometrics software package developed by StataCorp (USA). Stata is a statistical software package that offers a broad range of statistics to professional researchers in many disciplines. Stata is particular useful to professionals working in areas of biostatistics, medical research and economic research.

Course Programme

The aim of this workshop deals with the analysis of data that typically arise in time series. The emphasis is practical so that participants should understand both the principles of analysis and how to carry them out. Participants should, by the end of the workshop, be able to use Stata for carrying out their own analyses for the most common types of problem encountered in biostatistics and economic research. Participants are encouraged to bring their own datasets if they wish.

Who should Attend

Researchers, clinicians, public health professionals, students and lecturers in biostatistics, biomedical sciences, from public and private institutions who wish to increase their familiarity with quantitative methods in the principles of biostatistics, and applied to health care planning and evaluation, so they can more effectively address problems in health research and use computational tools to solve practical problems.

The course is also aimed at Economic Researchers, Model Builders; Financial Modellers, Arbitrage Traders; Quantitative Investment Analysts, Traffic Modellers, Energy Load Forecasters, University Instructors, Statisticians, Budget

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Analysts, Financial Analysts, Market Researchers, Currency & Interest Rates Strategists and Policy Planners & Researchers or anyone who is keen to use Stata as a tool for forecasting.

Fee and Registration

The fee for this three-day specialised and professional workshop includes extensive course materials, data-sets, lectures, lunches, morning and afternoon coffee/tea breaks, receptions and the opportunity to network with researchers and forecasters across the various industries in Asia.

This is a “hands-on” workshop. Participants are required to bring their own laptops.

The number of participants is restricted. Please register early to guarantee your place. Please complete the official registration form and fax to (65)-62506369 or email it to us at stata@eastasiatc.com.sg to reserve your place. Confirmation will only be made upon receiving full payment. Further instructions will be sent to confirmed participants.

MAS Financial Sector Development Fund (FSDF)

Participants may be eligible for Financial Sector Development Fund (FSDF) support on a case by case basis. Interested applicants should submit their applications to the FSDF Secretariat directly. For enquiries, please contact the FSDF secretariat at 65- 6229 9396 or via email at fsdf@mas.gov.sg.

You may use the printable MAS FSDF application form in Word format posted on our website. Please submit your applications to the FSDF Secretariat directly at least 6 weeks prior to the commencement of the course.

Course Outline (subject to minor changes)

The 3-day professional development workshop will cover the following topics.

(1) Martingale difference (MD) sequences. Testing for MD errors in ADL models. Effects of volatility clustering. Asymptotics for time series.

(2) General stochastic processes and types of dependence. Wold representation of a stationary process and Beveridge-Nelson trend-cycle decomposition of a nonstationary process. Hodrick-Prescott trend and Baxter-King business-cycle filters.

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(3) Likelihood in time series (estimation and model selection criteria). Unconditional and conditional (ML) estimation of stationary and nonstationary AR(1) processes.

(4) The three forms of an ARMA model. Infinite sums of random variables and lag polynomials.

(5) ACF and PACF of an ARMA process. Box-Jenkins univariate model fitting simplified by use of Akaike and Schwarz information criteria.

(6) Multi-step post sample forecasts into the future. Basic prediction up-dating formula. Wiener-Kolmogorov theory.

(7) Vector AR(1) models. State space models. The Kalman filter.

(8) Formulating, estimating and using structural and nonstructural VAR models. Impulse response analysis and variance decomposition.

(9) Cointegration, common trends and error correction.

(10) Autoregressive conditional heteroscedasticity (ARCH): generalizations and leverage effects. Stochastic volatility (SV) models.

Practical 1 : Some Basic Data Analysis (inspection, manipulation, statistics & interpretation).

Practical 2 : Trend Extraction and Business Cycle Analysis by Band-Pass Filtering.

Practical 3 : ARMA Model Selection and Forecasting.

Practical 4 : VAR Modelling, Prediction and Impulse Response Functions